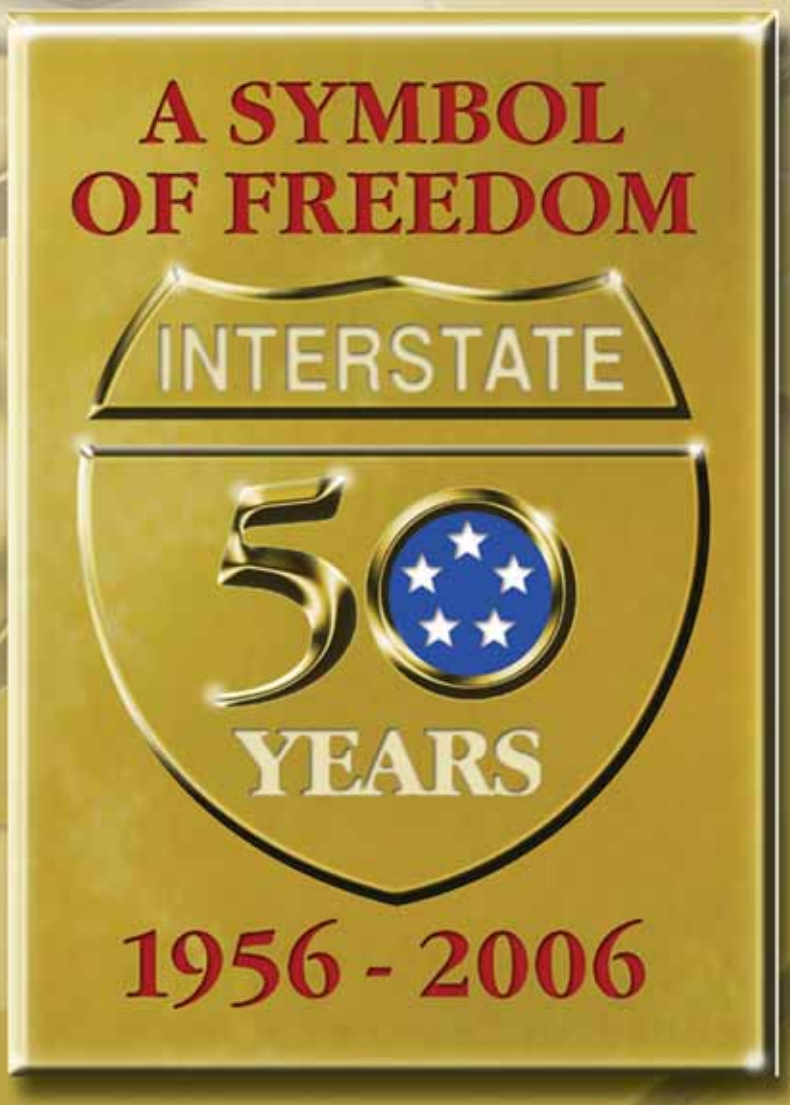
INSIDE

IOWA DEPARTMENT OF TRANSPORTATION NEWSLETTER JUNE 2006



Special Commemorative Edition

Message from the Governor

This month we are celebrating the signing of landmark legislation that set the wheels in motion to create our Interstate Highway System. When President Dwight D. Eisenhower signed the Federal-Aid Highway Act of 1956, the United States was forever changed.

At that time, many were wondering why Iowa and other rural states would need four-lane, access-controlled highways through cornfields to connect one state to another. Luckily, those in charge at that time saw the vision of highways being a means to economic prosperity and increased mobility for our citizens.

Since it is now so easy to back out of the garage and go wherever we want, it might be difficult to imagine what life was like before the interstates. In the 1940s and 50s roads were being constructed in every state, but there was not a cohesive plan for connecting these ribbons of concrete and asphalt. Nor were there standards for design, construction or safety features. It was not unusual for a traveler to end up at a dead end while attempting to cross state lines. If you did make it into a neighboring state, the roads could look and drive quite differently than those in Iowa. Near misses with oncoming vehicles were common on narrow two-lane roads, and we've all seen the images of vehicles up to their axels on mud roads after a good Midwestern rain storm.

Design consistency, safety improvements and a cohesive plan for connecting cities and states within the country have played a critical role in the growth of the nation's economy, quality of life, tourism and mobility.

The more than 46,000-mile system of superhighways has put Americans within a few days' drive of practically everyone else in our nation. It has changed the way we move people and goods. Yet, we tend to take this engineering marvel for granted.

Long-time DOT employees are a great asset to remind us how far we've come in our quest to create connections. Many of you remember a time when opening a segment of interstate was a frequent occurrence. It might have seemed that the world was opening up right before your eyes with Iowa products being shipped by the truckload to every place in North America.

Lieutenant Governor Pederson and I want to take this opportunity to thank Iowa Department of Transportation employees for their dedication to seeing us through this massive undertaking and for your continued diligence in constructing and maintaining all transportation systems in Iowa.

ONE 2 ONE

WITH DIRECTOR NANCY RICHARDSON

I am older than the interstate! That's not quite as old as "older than dirt," but it's old nonetheless. Fifty years old to be exact -- the interstate, that is. This summer we will celebrate the 50th anniversary of the signing of the Federal-Aid Highway Act of 1956 that provided the first funding for initial segments of this nation's interstate system.

It's a fascinating story about how the concept developed, how construction proceeded and some of the unique roles Iowans played in the development of the interstate. I'll leave those stories to other parts of the newsletter. Instead, I'll share a much more personal perspective – that of a satisfied customer.

The interstate existed for 10-15 years before I ever knew about it. I grew up in the northeast corner of Iowa, about as far as one can get from both I-35 and I-80, the backbone of our interstate system. It was when I went to college at the University of Iowa that I first came in contact with the interstate, since I-80 runs just north of Iowa City.

Even then I didn't "use" the interstate. My world was pretty much limited to campus (you know, classes, the library and all those serious academic activities), but I at least knew it existed. When I left Iowa City in 1973 and moved to west central Iowa, I began a closer relationship with the interstate. Although I didn't live in a town directly served by an interstate, I began to use it for recreational and social travel to get to Iowa City, Omaha, and to and around Des Moines.

In 1982, I began to commute from Jefferson to Des Moines, including a segment on I-80/35. At that point, my relationship with the interstate shifted from a casual to a serious one. Now getting to my job depended on the interstate. Since that time, I've commuted over I-35, I-80/35 and I-235, and I can't imagine how much time the interstates have saved me.

The interstate has helped me in times of emergency, too. If you've ever had kidney stones, you understand the value of the 15 to 20 minutes in saved travel time to the hospital. Or the opportunity to get to my father's deathbed quicker. And, while I've never been in retail, I certainly have shopped. The freshness of food, the variety of products, and speed with which things arrive at my doorstep, are all testaments to the interstate system. It is the backbone, I believe, of our economy.

Like most people, I take the interstate for granted. Upon reflection, I'm reminded of how much the interstate has enhanced my social, economic and physical well-being. I CANNOT imagine life without it! As DOT employees, we should take great pride in our roles in developing and maintaining it…and now in rehabilitating it for the next 50 years!!

On a personal note, I want to thank all of you who held me in your thoughts the past few weeks. And to the many of you who e-mailed, sent cards, came to the visitation or the funeral, or provided food or memorial donations, thanks from the bottom of my heart.

These have been the most difficult days of my life as I deal with the death of my only daughter, Nicole. I ache for her presence and am experiencing an unimaginable void in my life.

I find comfort primarily in two things. First is the knowledge of what an amazing, passionate and compassionate woman my daughter was in life, as a public defender, and in death, as a multiple organ donor.

My second source of comfort is you. The term "family" gets used pretty casually these days, but your outpouring of care, sympathy and affection for me during this very sad time in my personal life has affirmed for me that we at the DOT truly are a family. We are there for each other in good times and bad.

Let me assure you I felt your embrace and it helped steady me through this. When I said I was going to go to work—at least for a while—the day following the funeral, my husband discouraged it saying, "You don't want to deal with all those people." My answer, without hesitation, was, "Yes, I do. Those people care about me and that's where I feel safe." Thank all of you for that.

Nancy

Iowa celebrates interstate anniversary

As Governor Vilsack and Lt. Gov. Pederson pointed out in their message on page 2, it's easy for us to take the landmark accomplishment of the interstate system for granted. Because of the far-reaching effects of the system on our everyday lives, it's fitting to devote a bit of time and energy to the celebration of the freedoms we now enjoy due to the dedication of many Iowans and those across the nation who made this system a reality.

In addition to trivia and highlights of ongoing maintenance activities, this special commemorative edition of INSIDE compiles the series of articles that have been printed in INSIDE over the last nine months detailing the development of a national system of interstate highways.

There is so much information to learn about the interstate system we couldn't fit it all in an edition of INSIDE, so the Office of Media and Marketing Services has developed a Web site with just about everything you'd ever want to know about the system and the celebrations dedicated to it this month. Included on the Web site, and printed on this page are details on the 50th anniversary cross-country caravan and its two Iowa stops. Please check out the Web site, iowainterstate50th.com to find personal stories of former contractors and DOT employees on their interstate building experiences, as well as much more trivia, word games and a photo gallery, and where to find celebrations in other states.

If you stop by an Iowa Welcome Center in June, pick up a copy of the 50th Anniversary of the Interstate brochure. This document places some of the information posted on the Web site in a more traveler-friendly format.

However you get your information, please take the time to learn more about the development of these ribbons of highway that affect us beyond measure, but that we so often take for granted.

Two events welcome cross-country caravan

As you'll read throughout this edition of INSIDE, Dwight D. Eisenhower, then a young Army colonel, traveled through Iowa in 1919 on a cross-country journey that laid the foundation for the interstate system. The American Association of State Highway and Transportation Officials (AASHTO) and its member states invite you to participate in a reenactment caravan of Eisenhower's 1919 trek. Beginning in San Francisco, Calif., June 16 and ending in Washington, D.C., June 29, the caravan will travel nearly 3,000 miles along the interstate system on a route parallel to that taken by Eisenhower during the epic 1919 transcontinental military cavalcade. Details on the two Iowa stops set for June 23 are listed below.

Living History Farms

The theme of this event is "Rock'n Roads." The 1950s/60s-themed event will be held outdoors on the lawn near the entrance to the Living History Farms at 111th Street and Hickman Road in Urbandale. The free public event will begin at 11 a.m. and include activities, entertainment, displays and free food. The Iowa Hall of Fame Rock and Roll band, Jerry Martin and the Sounds, will be the headline performance with an additional performance by Richie Lee and the Fabulous 50's.

In addition to the live entertainment, there will also be exhibits and displays promoting Iowa and the impact that development of the Interstate highway system has had on our state and country. The displays will include vintage automobiles and road building equipment. At 2 p.m. a news conference and brief formal program will begin, featuring representatives of the official caravan and local dignitaries.

Iowa 80 Truckstop and Museum at Walcott

The stopover at the Iowa 80 Truckstop - touted as the world's largest truckstop - will include a reception for the caravan participants and a tour of the Iowa 80's Trucking Hall of Fame Museum. The museum features antique trucks, old signs, gas pumps, engines, and other trucking memorabilia. The truckstop opened in 1964, just as construction of the interstate in that area was nearing completion. No public event is scheduled at this location, but the caravan is scheduled to arrive at the truckstop at 5:30 p.m. for those interested in greeting the caravan participants.

Trivia

Official Name:
Dwight D. Eisenhower National System of Interstate and Defense Highways

Total Linear Miles:
46,837 (2004)

Interchanges:
14,750 (approximate)

Bridges:
55,512 (as of December 2004)

Tunnels:
82 (104 bores)

Cost:
The initial cost estimate for the interstate system was $25 billion over 12 years; it ended up costing $114 billion, taking 35 years to complete. As of 2004, the system contains more than 46,000 linear miles (68,500 km) of roads, all at least four lanes wide.

First Stretch of Interstate:
The first stretch of interstate, an eight-mile segment in Topeka, Kansas, opened Nov. 14, 1956, barely five months after the 1956 Act was signed.

Last Stretch of Interstate:
The last link, Interstate 105 in Los Angeles, was not completed until 1993.

Longest Interstate Route:
I-90, Seattle, Washington, to Boston, Massachusetts, 3,020.54 miles

Shortest Two-Digit Interstate Route:
I-73, Emery to Greensboro, North Carolina, 12.27 miles

Longest North-South Transcontinental Route:
I-95, Miami, Florida, to Houlton, Maine, 1,919.74 miles

State with Most Interstate Miles:
Texas, 17 routes, totaling 3,233.45 miles

State with Most Interstate Routes:
New York, 1,674.73 miles, 29 routes

Mileage vs. Traffic:
Interstate highways make up less than 1 percent of the total U.S. highway miles, but the interstates carry more than 20 percent of all traffic.

Rest Areas:
An exact count of rest areas on the Interstate System is not available. However, a count in 1972 reported 1,214 rest areas in existence. The number still operational today is not expected to differ dramatically from the 1972 figure.

Numbering System:
Two-digit interstate highways are numbered according to direction and location. Highways running north-south are odd numbered, while highways running east-west are even numbered. The lowest numbers are in the west and in the south.

Three-digit interstate highway numbers represent beltways or loops attached to a primary interstate highway (represented by the last two numbers of the beltway's number). Washington, D.C.'s beltway is numbered 495, because its parent highway is I-95.

If the hundreds digit of a bypass (the "4" in "405") is even, then it is likely (at least planned) that after the bypass splits off from its parent highway, the bypass will join up with its parent again. If the hundreds digit is odd, then the bypass is not expected to reconnect with the parent highway.

To avoid duplication within a state, a progression of prefixes is used for the three-digit numbers. For example, if I-80 runs through three cities in a state, circumferential routes around these cities would be numbered I-280, I-480 and I-680. The same system would be used for spur routes into the three cities, with routes being numbered I-180, I-380 and I-580. This system is not carried across state lines. As a result, two cities in different states along I-80 may each have circumferential beltways numbered I-280 or spur routes numbered I-180.

From Hearst to Pancho Villa

Seeing the need for national roads

Can it be that the Interstate Highway System was conceived, as legend has it, by President Franklin D. Roosevelt doodling three lines east and west and three lines north and south on a U.S. map? Whether or not this doodle was the beginning of cross-country motoring as we know it, most historians agree that when the Federal Highway Act of 1938 authorized a feasibility study of three east-west and three north-south national highways, the idea of superhighways crisscrossing the country was not new. A federally-funded, national road system had been proposed as early as 1906 by Senator William Randolph Hearst.

A century before Hearst's time, the National Road from Cumberland, Md. to Wheeling, W.Va. (then Virginia), began construction in 1803 as part of the legislation admitting Ohio to the Union. Funds amounting to 2 percent of the revenues derived from the sale of federal lands in Ohio were to be set aside for roads, part of it specifically for the National Road.

The first segment was opened to Wheeling in 1818. Plans to expand it to Jefferson City, Mo. and Vandalia, Ill. were developed, but nothing more than rough grading was accomplished and the road was never put into service. Issues surrounding the ability to raise revenue to maintain the road were its downfall. When a proposal to place toll booths on the section was deemed clearly unconstitutional, the federal government ceded the road back to the states beginning in 1836. For many decades, the federal government avoided building roads through or within a state except on federally owned land, although the topic was hot conversation for those connected to the Department of Agriculture's Office of Road Inquiry (precursor to the Bureau of Public Roads). In 1897 the Yearbook of the Department of Agriculture stated "...It would greatly increase the value of the interstate roads and stimulate a general public interest in road building if some of these lines (object lesson roads) could be so connected or combined as to form in a measure, a national system, such as was planned and partly built by the Government in the early days of this century. The most effective lines that could be adopted for this purpose would be an Atlantic and a Pacific Coast line, joined by a continental highway extending from Washington to San Francisco."

The public and majority of legislators were yet to be swayed on the necessity of such a road system,

Hearst to Pancho Villa, continued next page

Iowans were "in the mud" in the 1920s.

Hearst to Pancho Villa,
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and even more so, who would pay for it if it were to be built. The Post Roads Act of 1912 was the forerunner of the first federal-aid to the states in 1916. An effort to avoid fights over pork-barrel funds was thwarted when the Federal Aid Act of 1916 was passed with no provision for a system of roads, no definite standards of design and construction and was virtually wide open at both ends (adapted from comments by E.W. James, employee of the Office of Road Inquiry).

Meanwhile in the western U.S., the need to get roads out of the mud became perfectly clear to General Pershing as he chased Pancho Villa back to Mexico. This 1916 excursion was the first use of motorized equipment in actual battle conditions. While the success of the 2,000 vehicles deployed for the campaign, which lay strewn along 200 miles of mud roads in various states of break-down, was underwhelming, military planners saw the solution to questions about logistics in transporting American troops overseas to World War I.

Previously, all U.S. forces had traveled either on foot or horse-back. Transporting horses and their fodder overseas was not seen as logistically possible, so a radical decision was made to motorize. Detroit produced thousands of trucks, but embar-rassment set in when there were no adequate roads to get those trucks to harbors where ships were waiting to carry them to our boys in Europe. Trains of flat cars had to be brought in and the trucks loaded on them just to get around the segments where roads were impassable. It became obvious that a systems of roads had to be built.

Planning a national road system

1919 was a turning point in the debate over a national highway system. In July of that year, a young Army captain named Dwight David Eisenhower departed with 294 other Army troops for the military's first mobile caravan across the U.S. Poor road conditions caused the caravan to average five miles per hour for the 62-day trek from Washington, D.C. to San Francisco. This trip, and subsequent service in Germany with her well-maintained autobahns, left an indelible mark on the young soldier, one that would shape public policy in the decades to come.

Back in Washington the battle over a system of federal-aid highways raged as 1919 began. An exactly even split between the member states of the American Association of State Highway Officials (AASHO) on the continuation of the Federal-State cooperative road building plan and the death of Bureau of Public Roads (BPR) leader, Logan Waller Page in late 1918, added to the quarrel.

Iowa Highway Commission Chief Engineer Thomas H. MacDonald, who had played a key role in developing AASHO's federal-aid highway bill, became the new BPR chief in early 1919. With his technical background and experience as a state highway official, he proved to be the ideal successor to Page in this new phase of highway development.

Previously in Iowa, MacDonald had published articles advocating a classification system of roads into primary and secondary importance. He saw the primary system at approximately

Iowa Highway Commission Chief Engineer Thomas H. MacDonald.

10 percent of the total mileage, or about 10,000 miles in Iowa. With this calculation, MacDonald was convinced every trading point in the state would be reached from at least two directions by primary roads.

Key to MacDonald's plan was the cooperation between the states and the federal government to ensure the primary systems in each state are connected with the primary systems of the adjoining states.

The most difficult problem facing MacDonald was the gap between advocates of long-distance roads and advocates of farm-to-market roads. The answer developed by MacDonald, in close cooperation with AASHO, was contained in the Federal Highway Act of 1921. Of the Act and the Bureau of Public Roads, MacDonald said in 1922, "…The Bureau does not seek to direct the states, but to cooperate with them. There is now a plan of action for the guidance of both organizations that is so clear and so explicit that neither can escape the responsibilities imposed. The Federal requirements are fairly defined and will be sincerely and faithfully enforced."

The 1921 act rejected the view of long-distance road advocates who wanted the federal government to build a national highway network. To satisfy them, the act limited federal aid to a system of federal-aid highways, not to exceed 7 percent of all roads in the state. Three-sevenths of this system must consist of roads that are "interstate in character." Up to 60 percent of federal-aid funds could be used on the interstate routes.

By retaining the federal-aid concept, the act also satisfied advocates of farm-to-market roads. The state highway agencies could be counted on to consider local concerns in deciding the mix of projects.

In cooperation with the state highway agencies, the BPR completed designation of the federal-aid system in November 1923. It totaled 272,000 kilometers (km) or 5.9 percent of all public roads. The federal-aid system would expand as states completed work on their original systems.

The 1920s were a "golden age" for road building. In 1922 alone, federal-aid projects totaling 16,500 km were completed at a cost of $189 million, three times as much roadway as had been improved since the start of the federal-aid highway program in 1916. The projects usually involved providing graded earth, sand-clay, or gravel surfaces.

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Planning the system,
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MacDonald set out to build state-federal partnerships and engineering professionalism; dedicate highway user revenues at the state level; establish independent highway commissions, highway research, highway classification, programming and project development based on economic principles; and transfer highway jurisdictions from counties and townships to the states, just to highlight a few of the programs undertaken while MacDonald led the BPR.

Eisenhower and his troops passed through Tama on their 1919 cross-country caravan.

Top: Transcontinental convoy in 1919 traveling along the Lincoln Highway which stopped in Tama, Iowa.
Center: Along for the cross-country trip was Dwight D. Eisenhower (right).
Bottom: Another shot of Tama stop.

Road building as a Depression-era economic stimulus tool

Gaining momentum in the 1920s, the road-building frenzy was actually a well-orchestrated and mutually beneficial endeavor for both the states and federal government.

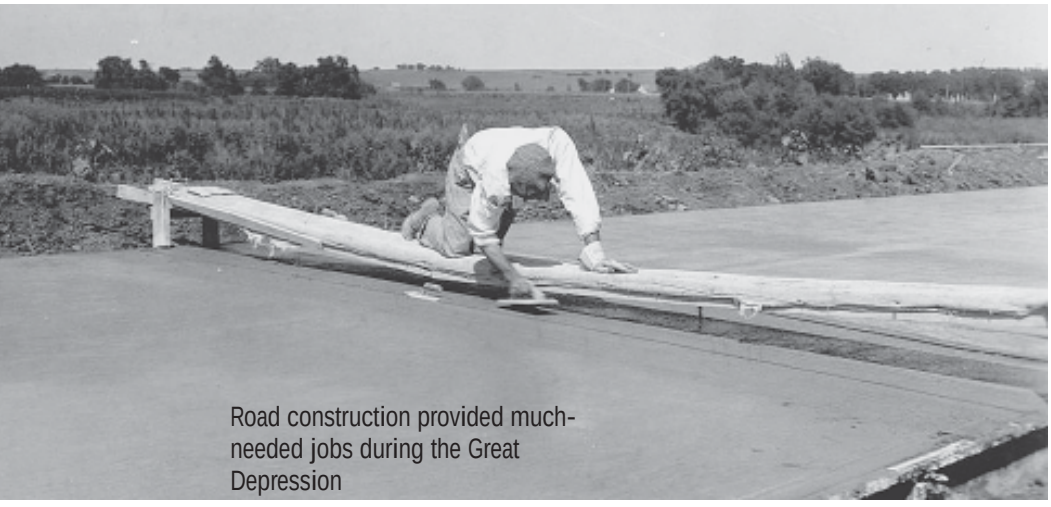
A universal numbering system was being established. Since the country was just about twice as wide (east to west) as it was long (north to south), it made sense to establish an adjustable, simple pattern of north-south roads with odd numbers increasing from east to west, and east-west roads with even numbers increasing from north to south. Numbering by 10s from 10 to 90 would provide the nine principal east-west routes. Numbering by 11s and 5s (1, 5, 11, 15, etc. to 101) provided 20 base-route numbers for the north-south pattern.

With this pattern in mind, the task fell to the Bureau of Public Roads to gain the support of several existing highway associations. One of the best-represented groups was the Lincoln Highway Association. The federal and state governments worked with this group to keep the U.S. 30 designation on as much as possible of this roadway as it was built across the country. As they were the strongest of the associations, once they were on board with the numbering system, no other association disagreed to any great extent.

The first coast-to-coast road was completed in 1928. Phenomenal growth in the number of automobiles and their use provided a growing base of user revenue for the states.

Then came Black Tuesday---Oct. 29, 1929. The stock market crash brought the nation's financial community to its knees. President Herbert Hoover called together the captains of industry to develop an extensive program of public works to keep the economy moving.

By the end of 1930 the entire program, some $80 million allocated to federal-aid roads, was in place. It was expected that the whole program, including the states' money, would provide employment for 100,000 men.



Road construction provided much-needed jobs during the Great Depression

Since the state coffers in most locations were depleted, a system of advancing money from the federal government to the states was devised. As a result, $80 million was appropriated as an advance to be paid back out of future reauthorizations, and it could be used to match regular federal-aid funds.

Always the voice of reason, Thomas MacDonald, former Iowa chief engineer then in charge of the federal Bureau of Public Roads, advocated a need for planning surveys in all states as a means of providing legislators and the public with much-needed facts to make better decisions about road building.

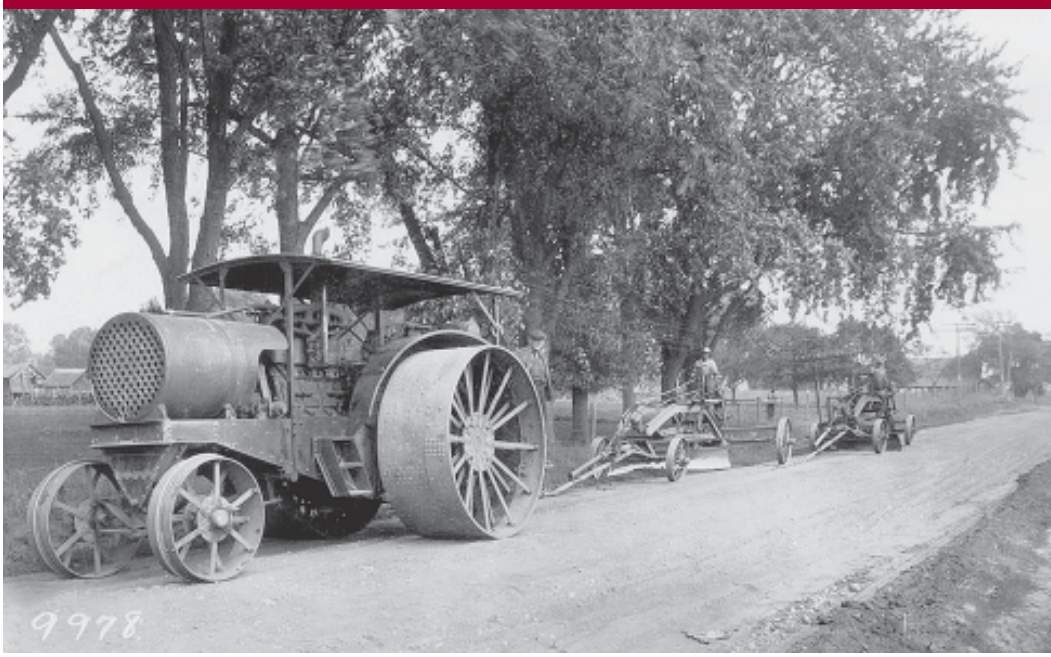
According to an article from American Highways, the advanced funds were to be repaid to the federal government over a period of 10 years commencing in 1938. The article voiced the concern that so much money was being advanced to the states that little would be left for construction in future years.

Adding to that concern was the inability of Congress to pass a reauthorization act that provided the initial funding for road construction. Each Congress since 1916 had provided a continuance of the federal-aid program for a two-year period, until the Congress that adjourned in 1933.

With no reauthorization to provide the bulk of federal aid, and most state road funds being

Economic tool, continued next page

Early road construction equipment



Economic tool,
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diverted for other uses, the American Association of State Highway Officials (AASHO) felt the work of the last 40 years was in jeopardy. They suggested a federal-aid authorization of not less than $100 million for fiscal year 1935. This would balance the budget for fiscal year 1934, skip one year of reauthorization and, at the same time, ensure a moderate 1935 construction program.

The record shows that $400 million was actually delivered through the Bureau of Public Roads. Some of the rest of a $3.3 billion package found its way to highways, delivered directly to municipalities, counties and other special entities. Lack of coordination caused a great deal of overlap and confusion.

Because many of the states saw the infusion of federal funding with no required match, they quickly diverted state road funds to other uses. At the same time, vast miles of minor roads were transferred to the states without any revenue to go with them.

To turn the tide and convince the public and state legislatures of the need for non-federal funds for local roads, planning was hailed as the way to bring order to the chaos that had previously prevailed.

State highway engineers such as Frank T. Sheets of Illinois called for “rational planning, replacing the sentimental appeal of early good roads boosters with the highway economist armed with sound plans, fundamental facts regarding the dividend-producing aspects of improved highways, and convincing proof of the equity of proposed highway tax collection and distribution.”

Iowa followed (and continues to follow) the steps outlined by Sheets in the mid-1930s, including the performance of traffic and economic studies, and formation of a commission to study the information and plan a future highway program.

By 1934 the nation’s hysteria had passed and the Hayden-Cartwright Act provided for a return to the regular program of state-federal cooperation in 1936.

The plan comes together

When the effects of the Great Depression began to wane with the beginning of World War II, state highway planners heeded the advice of Bureau of Public Roads (BPR) chief Thomas MacDonald and prepared comprehensive needs studies.

MacDonald had concluded the time had come for America to begin the next stage of highway development. The federal-aid system would be "completed" by the late 1930s. Although many segments of the rural network had not been paved, virtually all had received initial treatment. As MacDonald said in a 1935 article: "We have reached a point in our development where we can no longer ignore the needs of traffic flowing from the main highways into and through cities and from feeder roads to the main highways."

Herbert S. Fairbank

Migration from urban to rural areas seen during the Great Depression peaked in the mid-1930s. Because of the influx, rural areas were seen by many as wholesome, while cities were dens of iniquity. Decay of the central cities was rampant. A study commissioned by President Franklin D. Roosevelt leaned heavily on city planning as a solution and on the use of highways as a tool for change.

To provide the data needed to plan the highway network of the future, MacDonald put his faith in the highway planning surveys conceived by Herbert S. Fairbank, chief of BPR's Division of Information. Fairbank's goal was a comprehensive state-by-state accounting of traffic on the American highway.

In 1939, using data collected from 46 state planning surveys, the Bureau of Public Roads presented a Master Highway Plan. This report became the basis of President Roosevelt's system of inter-regional highways and laid the groundwork for the future interstate highway system.

Components of the proposed master plan included:

1. Classification of all rural roads by order of importance. This activity was to be carried out by a joint action of the Secretary of Agriculture and the several state highway departments and would be based on the statewide highway planning survey.
2. Formulation of a comprehensive federal policy governing its participation in the cost of improving several classes of roads and defining the objectives of that federal participation;
3. Establishment of general standards for roadway improvements using federal funding; and
4. Enactment of federal laws and regulations regarding vehicles, to apply on all roads improved in whole or in part with funds of the federal government. The laws and regulations prescribed maximum weights, speeds and dimensions of vehicles, and minimum requirements for vehicle braking, lighting and tire equipment, in coordination with established standards of highway design.

The National Superhighway system, clearly the precursor to our current Interstate Highway System, was comprised of direct inter-regional routes described in the proposed plan as "...following the alignment and incorporating the improvement of existing highways wherever feasible, but departing from existing roads wherever necessary to obtain direct alignment and high standards of curvature and gradient. Such a system would serve approximately one-eighth of the total traffic moving over all rural highways. It would include all of the important lines of long-distance travel… "

In 1944 Congress authorized a system of national highways. In 1947 the system was officially designated. Although construction did not begin in earnest until the passage of the 1956 Highway Act, the plan was there in black and white. President Dwight D. Eisenhower's vision of cross-country routes was about to become reality.

The slipform paver "Jeep Skate" inventor James Johnson and interstate construction

by Dena Gray-Fisher

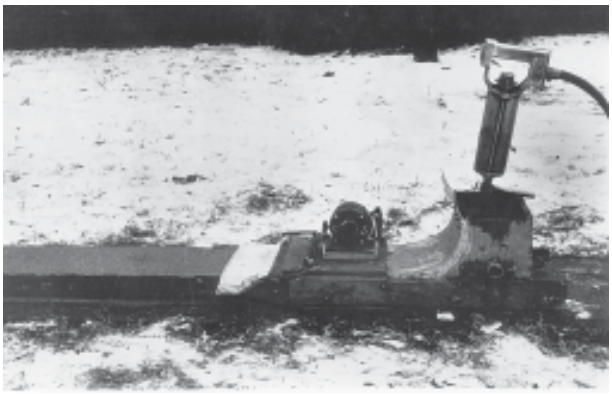
James Whitmore Johnson, or "Jimmy" as he was affectionately known, was the youngest of six brothers. Johnson was born Dec. 2, 1899, on a farm near Thurman in Fremont County. Following service in World War I, he enrolled at Iowa State College, graduating with a bachelor of science (B.S.) degree in civil engineering. He went to work for the Iowa Highway Commission as an inspector June 13, 1922. In March 1924 he became assistant engineer for the engineering experiment station. In 1927 he received his master's degree. In June 1927 he became assistant lab chief at the Iowa Highway Commission and lab chief in April 1938.

James "Jimmy" Johnson, lab chief, Iowa Highway Commission.

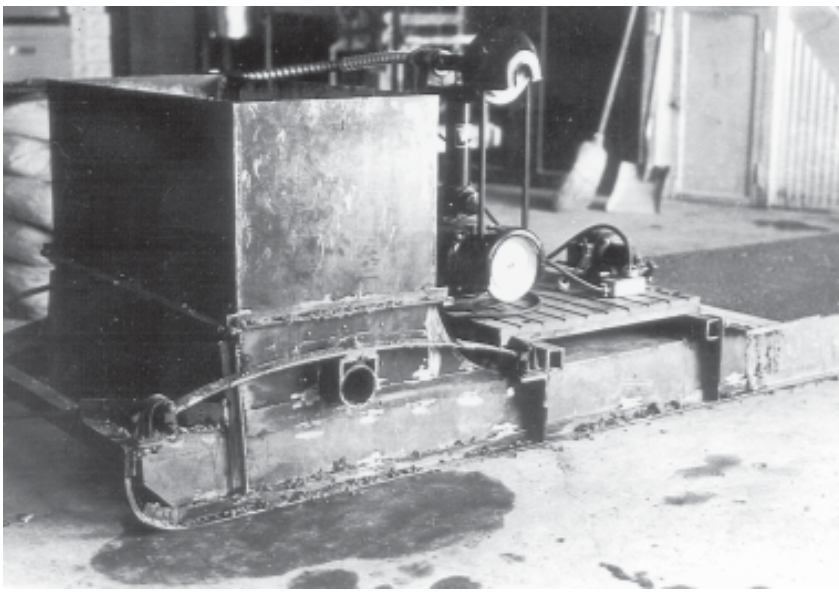
In 1946 Johnson and two other commission employees, Rudy Schroeder and Willis Elbert, attended a demonstration of cement-treated base construction. After witnessing the demonstration, Johnson suspected that a mix with an increased proportion of cement that was vibrated into place by a machine would eliminate the need for fixed forms and significantly increase the amount of pavement that could be laid in a day.

In 1947, at the Iowa Highway Commission laboratory in Ames, the three men experimented with their idea and constructed a small prototype that extruded a slab of portland cement concrete 18 inches wide by 3 inches deep.

The experiments continued and in 1948 the second model was built and tested. This model was also pulled by cable and laid a slab 3 feet wide by 6 inches deep. With this model, a 4-foot wide, 5-inch thick section of sidewalk was slipformed.



First prototype slipform paver, circa 1947



The second model of the slipform paver laid a section of pavement 3 feet wide by 6 inches deep, Circa 1948

Slipform paver history, go to next page

Slipform paver history, from previous page

To lay concrete the paver was attached to a ready-mix concrete truck, which would discharge its load into the paver, then pull the paver forward. After a few short tests, the machine's performance was deemed satisfactory for use on a public project.

The final Iowa State Highway Commission slipform paver could pave one lane of traffic in a single pass. Circa 1949

First use of slipform on a public project

In September 1949 the one contract bid received by the Iowa Highway Commission to pave a 20-foot wide, half-mile section of highway through Primghar in northwest Iowa was rejected based on cost. As a result, the Iowa Highway Commission, the O'Brien County Board of Supervisors, and Primghar officials decided to experiment with the new slipform paver. The Iowa Highway Commission had little time to complete the project because it had committed the machine to lay concrete in Cerro Gordo County Oct. 9. Grading of the Primghar road began Sept. 19, paving began Sept. 28 and was finished Oct. 1, well in advance of the Cerro Gordo County project.

The first slipform paving project did not proceed without complications. Because the paver produced a section 10 feet wide, a single lane was created by laying two sections side by side, leaving a three- to four-inch gap between the sections that workers had to fill later. Hairline cracks developed in the surface of the pavement, and engineers worked to diminish the level of cracking.

Prototype used on three additional public projects

The Iowa Highway Commission used the 1949 prototype machine three more times. In October 1949, as promised, the machine was used in Cerro Gordo County to lay a one-mile section of 20-foot wide pavement (two 10-foot passes) on a county road between U.S. 18 and Iowa 106.

Four years later, the Iowa Highway Commission laid a quarter-mile concrete base with the paver in eastern Iowa on U.S. 30 in Cedar County west of Mechanicsville.

In 1954 the "Jeep Skate," as it had become known, was leased to Raymond Andrews Sr. of Andrews Concrete in Mason City. The lease rate was two cents a square yard to pave a road at Churdan in Greene County. The contractor altered the machine, removing the concrete hopper in front to allow concrete to be dumped directly on grade, much as it is today.

Slipform paver is commercially manufactured

Despite the fact that two additional miles were scheduled to be paved in Payton with the "Jeep Skate," the Churdan project was its last. By 1955 commercial firms had developed functional slipform pavers. Glen Perkins of the Quad Cities Construction Company produced the full-width Quad City Paver that advanced on crawler tracks, rather than on wheels. The Quad City Construction Company completed approximately 28 miles of slipform paving in Iowa in 1955. That same year highway construction crews in Colorado and Wyoming used the slipform paver, and a commercial need for the technology took hold.

In just a few years, several equipment manufacturers were marketing slipform pavers capable of placing concrete up to four lanes wide. The original "Jeep Skate" was sold to Raymond Andrews Sr., which he later used to pave the Merle Hay Mall parking lot in northwest Des Moines. The paver is presently owned by Raymond Andrews Jr. of Andrews Prestressed Concrete, Inc. in Clear Lake.

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The Quad City Paver was in use in 1957 on a paving project approximately three miles west of Iowa 17 near Graettinger.

Johnson recognized for his contributions

Johnson, who later in his life was referred to as the "father of the slipform paver," retired from the Iowa Highway Commission in 1966. In New York City on Dec. 12, 1968, he was presented the American Concrete Pavement Association's first Hartmann Award (now known as the Hartmann-Hirschman Award). The award is reserved exclusively for those who have rendered outstanding service to the concrete pavement industry and to the association. On Feb. 14, 1979, he received the Iowa Concrete Paving Association's Outstanding Achievement Award for his contributions to the industry during his career at the Iowa Highway Commission.

Contribution revolutionized highway construction

The slipform paver, which arguably could be Iowa's greatest contribution to highway construction, significantly impacted the economics and nature of portland cement concrete road construction. In 1949, on a good day, construction crews could lay about 1,000 feet of concrete using fixed forms. Modern slipform pavers are capable of laying pavement in widths of 12 to 50 feet, up to 19 inches thick, at a rate of a mile or more a day.

Over the years, the evolution of the slipform concept and advances in manufacturing technology have provided higher productivity per worker-hour, greater efficiencies in materials usage, less traffic congestion per job, and a more appealing finished product per dollar invested by the public.

Slipform paver instrumental in building of the interstate

The slipform paving machine was also instrumental in accelerating construction of the greatest road building project in American history—the construction of interstate highways. Without the slipform paver, construction of the interstate could have taken four or five times longer.

The first interstate construction project in Iowa to use the slipform paver was constructed in 1964 on I-80 in Iowa County by the Fred Carlson Company of Decorah.

Planning is complete, but funding is slow to come for the Interstate Highway System

After nearly three years of work, a plan was set for a system of 33,900 miles of interregional roadways, plus an additional 5,000 miles of auxiliary urban routes. The plan, developed by the National Interregional Highway Committee, which was appointed by President Franklin D. Roosevelt and headed by Thomas H. MacDonald, commissioner of the federal Bureau of Public Roads, was detailed in a January 1944 report to Congress.

Later that year in the Federal-Aid Highway Act of 1944, Congress acted on MacDonald and company's recommendations. The act called for designation of a National System of Interstate Highways to include up to 40,000 miles "…so located, as to connect by routes, direct as practical, the principal metropolitan areas, cities and industrial centers, to serve the National Defense and connect at suitable points, routes of continental importance in the Dominion of Canada and the Republic of Mexico."

When the first 37,700 miles of roadway were announced by MacDonald and Philip B. Fleming, Federal Works administrator, hopes were high, but progress was slow since no funds were authorized to build the system.

Once funding was complete, construction on the interstates could begin.

The first funding set aside specifically for construction of the interstate came in 1952, but only a token amount of $25 million a year for fiscal years (FY) 1954 and 1955 was appropriated. Legislation in 1954 authorized an additional $175 million annually for FY 1956 and 1957.

On June 29, 1956, it was official. President Dwight D. Eisenhower signed the Federal-Aid Highway Act of 1956 to provide more federal funding for road building in the coming four years than in the previous 40. Title II of the Act, called the Highway Revenue Act of 1956, created the Highway Trust Fund as a dedicated funding source for the Interstate Highway System. Revenue from gas and other motor-vehicle related user taxes was credited to the Highway Trust Fund to pay the federal share of the interstate and all other federal-aid highway projects. Also new with the Highway Trust Fund was the 90 percent federal funding share of interstate construction.

As he signed the legislation, Eisenhower emphasized the need for the use of photogrammetry, modern management practices and standard designs to efficiently implement such a large program.

The 1956 act provided for an extended network of more than 41,000 miles and nationwide design standards. The standards included a minimum of two, 12-foot lanes in each direction, ten-foot paved right shoulders and design speeds of 50-70 miles per hour.

At its November 1956 meeting, the American Association of State Highway Officials' outgoing president, Rex Whitton of Missouri, noted that studies of cost estimates, maximum sizes and weights, policies for reimbursing for highways already on the interstate system, and a study on the costs of different classes of highways were critical to the future of the highway program. At that meeting John Volpe, Federal Highway Administrator, also warned of the temptation to overbuild due to the 90 percent funding level provided by the federal government.

During the meeting, discussion centered on highway improvements in urban areas as more than half the funds planned for the system would be spent there due to the extremely high cost per mile of constructing an urban facility. The benefits discussed included the roadway's service to transit, as well as personal vehicles, and using properly placed infrastructure to encourage good urban development.

Major issues are brought to the table

In signing the highway bill of 1956, President Dwight D. Eisenhower made more money available to state highway departments during the four years that followed than in the 40 preceding years. The federal Bureau of Public Roads (BPR) and state highway departments were gearing up for a phenomenal growth spurt.

At the 1957 Mississippi Valley Conference, American Association of State Highway Officials (AASHO) president William Bugge spelled out what he considered to be the main issues facing state highway departments. With the staggering implications of the new program, Bugge stressed the need to evaluate each state's organizational structure and provide career stability to attract sufficient engineers to do the job. He felt that the highway departments must depart from tradition and employ consulting engineers to help level off the peaks in the design load.

Bugge cited an article in the American Road Builder Newsletter that predicted that the concepts of limited access and bypasses were so radical that state legislatures would not pass enabling legislation, meaning many of the states would have to pass up the 90 percent federal funding for interstates and use their funding for regular 50-50 match projects.

Also in 1957, Bugge spoke to the Western Association of State Highway Officials. In that speech he emphasized that states must step up and continue the initiation of projects. He noted that the federal government was not capable of running a vast highway program, even if it wanted to. The onus was on the states to come through with appropriate legislation, planning and employee development.

With such a radical plan, acquisition of right-of-way was going to become a major issue as 75 percent of the interstate was to be built on new alignment. Clifton Enfield, BPR's general counsel, noted in a speech to the American Right-of-Way Association in 1957 that right-of-way acquisitions during the next 13 years would exceed the total of such actions for highways in history. He stressed that since the function was so new, whole new disciplines and concepts would have to be developed. New legislation would have to be enacted, standards developed, appraisers hired and trained, etc… and it all would have to be done quickly. He said the very nature of right-of-way acquisition by eminent domain would result in litigation, a field new to the state highway departments, but they must be prepared for it.

With the underlying issues being brought to the table and discussed around the country, some practical matters were being resolved. On Aug. 17, 1957, the interstate numbering sign policy and procedure was presented at the AASHO Committee on Administration. More than 100 designs were considered, and the now-familiar shield was selected. The sign measured 36 inches high by 36 inches wide for two-digit routes, and 45 inches high/wide for three-digit routes.

Naming conventions had been established years before during the planning stages of the system, with two-digit interstate highways numbered according to direction and location. Highways running north-south are odd-numbered and those running east-west are numbered evenly. The lowest numbers are in the west and south. Three digit numbering was reserved for beltways or loops attached to a primary interstate highway.

Highway Instrument Training School launches DOT careers

Don Fetters and his level near Cumming on I-35, April 1957

When funding for the Interstate Highway System was secured in 1956, the push was on for states to begin grading and paving the very next spring. According to a paper submitted to the County Engineers' Conference held in December 1956, Iowa Highway Commission Personnel Engineer James Hoag said Iowa's 1957 construction program was expected to almost quadruple the highway plan of 1955.

During this time period a shortage of qualified highway engineers was being felt around the country. With the additional work brought by the interstate, Hoag said some state departments were as far as five years behind in the design of plans for appropriations that were already available. In Iowa, cooperation between Iowa State College (now Iowa State University) and the Iowa Highway Commission provided a training school for technicians to alleviate the pinch in our state. While the school stressed that the participants were not going to be trained engineers, the engineering work they would be able to complete would free up a great deal of time for the professional engineers on staff.

The first highway instrument training school, called "Road Scholars" by some, was held in early 1956. In planning the 10-week session, six assistant resident engineers were chosen and enthusiastically accepted the responsibility to teach the course to be held at Iowa State. The six were brought to Ames in advance to learn methods of adult instruction.

Once the instructors were ready, it was time to select candidates for the school. Each resident engineer chose several employees to take the entrance exam for the program. Arithmetic, clerical speed, mechanical aptitude and written expression were tested in 116 men (there were no women in the field offices at that time). Upon grading those tests, 64 men were notified of acceptance to the school. From the 64, some had as little education as sophomore status in high school. Others had some college experience, but most were high school graduates with no additional training.

The course began by the men moving into the Memorial Union in Ames where they would live and study for the duration of the course. The Iowa Highway Commission paid full salaries and furnished meals, housing and transportation home each weekend. All reports are that morale among the men was very high. They seemed to fully understand that this was a chance for them to substantially increase their career potential without having to attend a full four years of college.

The group of 62 (one man dropped out following major surgery and another was disqualified for dishonesty) was divided into three subgroups, two sets of 20 men each and one set of 22 men. Two teachers were assigned to each group. Each instructor was to teach one-half of each day, leaving the other half for preparation and grading of work.

Classes included instruction on basic arithmetic and mathematics, followed by a three-day study of field trigonometry. All classes were based on field use and followed the procedures used by the Iowa

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Highway Commission to simulate on-the-job conditions, rather than delving into theory. The use of equipment such as levels, transits and other field work instruments was also covered by surveying points on the Iowa State campus. Field work of all types was taught, ranging from topography through centerline establishment, cross sections, setting of grades, simple curves, compound curves and spiral curves. In his paper, Hoag stressed that practical aspects of this training was the key. Teaching survey theory was not the intended purpose.

In his paper to the County Engineers' Conference in 1956, Chester Wells, assistant resident engineer and one of the session's instructors, wrote, "The presentation of new ideas to the men was at a rapid rate, and many subjects were returned to as time was available."

Daily, seven hours of classes with two to five hours of homework were common. Wells wrote, "Within a period of 9 ½ weeks we crammed in a major part of three quarters of surveying. Most of the information would take five years field experience to come into contact with."

While enthusiasm for the class ran high from both instructors and students, the real test of success would come in the field. Following completion of the first class, all six district engineers and 24 resident construction engineers were quizzed on the work of the graduates. Only one resident engineer returned a negative report. Upon investigation it was learned that instructions as to the qualifications of the graduate were not adequately conveyed to the engineer. He had given the graduate work to do that had not been presented in the class and so he failed in his assigned duties.

In the year following graduation, 10 of the 62 men were being used as instrumentmen, with little or no supervision. Two resident construction engineers stated they each had a graduate who was a better instrumentman than current, more experienced employees.

Of the remaining 52 men, 30 were working as assistant instrumentmen, which was the goal of the class in the first place. Of these 30, it was reported that 10 would likely be ready for a promotion in the next construction season. The least accomplished of the graduates were still very successfully working as inspectors and many becoming top inspectors, as the school also taught the reading of construction plans and preparation of construction reports. Many engineers commented that additional supervisory instruction would be needed for these men to advance further, since many of them were younger and lacked that element.

The class was continued at some level for the next five years. In a report to the county engineers in December 1959, Iowa Highway Commission Personnel Engineer Don Zierath said, "This course is not an amateur effort. It is a professional product and, as such, stands very high, we feel, in the field of technical training. The course material is reviewed annually and being improved by addition, deletion and shifting all the time."

According to Zierath, part of this shift included the addition of four and one-half days devoted to inspection procedures and a full day for a trip to see projects in progress. During the process it was found that not all attendees were suited for survey work. Many had more aptitude as inspectors and the coursework was modified to cover a wider variety of topics to fill that need. It was thought the inspectors that came out of this class had much more rounded perspectives than did other inspectors because of their exposure to survey work.

Another point used to illustrate the value of this school is the low turnover rate of graduates. Zierath states that of the 250 current graduates, 203 were still on the payroll at the end of 1959, which he noted "is a lower turnover rate than any other single group of employees in our organization."

Of the 203 employees who attended the program from 1956 to 1959, 88 had become inspectors, 75 were instrumentmen, 33 were party chiefs, and 7 were office workers. In a breakdown of those 47 graduates no longer on the payroll, 16 had left to attend college, 7 entered the military, 7 were terminated, and the other 17 resigned for various reasons.

Iowa's Interstate Highway System

The Iowa Highway Commission started with a blank slate when they began sketching out Iowa's portions of the Interstate Highway System. Efforts were quickly initiated to begin design of the system, acquire the needed right-of-way, and finally, build what was to be a 710-mile, ultra-safe highway system.

Centerline of I-35 near Cumming looking north in 1957 (above) and 2006 (below)

Iowa's original interstate plan included the development of Interstates 29, 35, 74 and 80. The Highway Commission estimated it would cost taxpayers $478.77 million to complete all 710 miles.

Eventually, other freeways were added to Iowa's plan and the total miles was raised to 781.51. With the additional highways, the Highway Commission revised its estimated cost to $588.6 million.

In October 1956 the Highway Commission let the first interstate project for bid. By Sept. 21, 1958, the first section was opened to the public. The project was a short segment at the southwest edge of Des Moines - I-35/I-80.

On Nov. 7, 1976, the Iowa Department of Transportation became one of the nation's leaders in completing the four-lane Interstate Highway System by opening a 50-mile segment on I-35 between former U.S. 20 near Williams and former Iowa 106 near Clear Lake. The opening marked completion of the original 710 miles of the system.

On Sept. 12, 1985, nearly 27 years after the first section of roadway opened in 1958, Iowa's interstate system was complete. The last section opened to the public was located on Interstate 380, the link between Waterloo and Iowa City. The largest and most expensive public works project in the state's history totaled 781.51 miles, cost $1.05 billion and was constructed at a cost of $1.34 million per mile.

Maintaining the investment

America's Interstate Highway System is now becoming a victim of its own success. In 1956 Congress never envisioned its incredible results - more people are traveling to more places than ever before. Americans are traveling almost twice as much as they did in 1973, and the number of cars and trucks on the nation's roads has increased by more than 50 percent.

This success poses a real dilemma for Americans. Though highway spending has increased steadily since 1956, it has not kept up with inflation. Funding is falling short of what is needed to maintain the system.

The combination of this incredible success and potential lack of funding means that in the future Iowans may be facing a bumpy road. During its 50-year life, the Interstate Highway System has taken a

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Current bridge construction on I-235 in Des Moines

real beating from high usage and vehicle weights. Nearly 35 percent of the urban interstates in the country are rated as being in poor or mediocre condition.

Iowa's commitment to the system is evident to anyone passing through Des Moines. Interstate 235 through the city is in the midst of a $426 million reconstruction with completion scheduled for 2007. Once this huge undertaking is complete, the DOT has set its sights on reconstruction of the interstates in the Council Bluffs area, as well as work in Sioux City and Iowa City.

Benefits

One of the greatest benefits the interstate provided was a significant reduction in travel time. In 1956 the average speed between major metropolitan cities in Iowa was 36.5 miles per hour. Today, with the safety enhancements of the interstate, those speeds are nearly doubled and travel times cut in half.

Construction of the interstate can be closely linked to Iowa's economic growth over the past 40 years. Improved accessibility to markets, raw materials and consumers increased the use of the land near interstate routes. The highway system also benefited employers and employees by broadening the labor and job markets and reducing commuter travel times.

Linking one state to another brought new tourism and recreational opportunities as well. Piling into the station wagon for a cross-country trip became a tradition for many American families. Development of recreational facilities along these routes also blossomed. Today, there are travelers who plan trips just to see Iowa's 10 new-generation rest areas situated along the Interstate Highway System.

The 2006 reenactment caravan

Eisenhower crossed Iowa in 1919, where the soldiers battled days of engine-clogging dust, and bridges and culverts that collapsed under the weight of their heavy trucks. Despite the difficulties the troops encountered, the caravan was greeted by throngs of welcoming Iowans who supplied them with bountiful Iowa hospitality. Eisenhower acknowledged that this trek laid the foundation for his belief that the nation required an efficient Interstate Highway System.

The American Association of State Highway and Transportation Officials (AASHTO) and its member states invite you to participate in a reenactment caravan of Eisenhower's 1919 trek. Beginning in San Francisco, Calif., June 16 and ending in Washington, D.C., June 29, the caravan will travel nearly 3,000 miles along the Interstate Highway System on a route parallel to that taken by Eisenhower during the epic 1919 transcontinental military cavalcade.

To honor this historic journey, the motorcade will stop on June 23 at Living History Farms in Urbandale. Attractions planned for the event include a concert headlined by Jerry Martin and the Sounds (with our own DOTer, Layton Zbornik III) from Mason City. The second stopover later that day will be at the Iowa 80 Truckstop near Walcott. That stop will include a reception for the caravan participants and a tour of Iowa 80's Trucking Hall of Fame museum. For additional details, see page 4 of this edition of INSIDE.

Eisenhower's 1919 caravan stopped in Tama

Service Awards

Information supplied by the Office of Employee Services for June 2006

40 Years

Douglas Cox, Britt construction; **Larry Haynes**, Manchester construction; **Howard Thielen**, Design

35 Years

Allan Aasen, District 6 Office; **Donna Banker**, Finance; **Daniel Brack**, Oakdale garage; **Dale Buttolph**, Motor Vehicle Enforcement; **John Couser**, Cedar Rapids materials; **Thomas Hall**, Motor Vehicle Enforcement; **Dennis Kunze**, District 6 Office; **Donald Like**, District 6 materials; **Mark Picht**, District 2 materials; **Duane Sands**, Cedar Rapids construction; **Chris Steffensmeier**, Mount Pleasant garage; **Jerome Steward**, Cedar Rapids maintenance; **Jack Summers**, Jefferson construction; **Joseph Thoman**, Manchester construction (photos will run in the July edition of INSIDE)

30 Years

Stevan Martin, Maintenance

25 Years

Mark Carter, District 6 bridge crew; **Eldon Meyer**, Algona garage; **Larry Steckelberg**, Motor Carrier Services

20 Years

Mark Brandl, Davenport construction; **Robert Griffith**, Marion garage; **Todd Hanson**, Materials; **Barton Hofeldt**, Davenport garage; **Larry Humphreys**, Washington garage; **Steven Kennedy**, District 1 materials; **Michael Lynch**, Rockwell City garage; **Janice Queener**, Motor Carrier Services; **Nyle Sheetz**, Mount Pleasant construction

15 Years

Kathy Bales, Sabula garage; **Raymond Hacker**, Williamsburg garage; **Arnold Laures**, Waukon garage

10 Years

Denise Said, Dubuque DL station; **Victoria Ulrichs**, Waterloo DL station

Personnel Updates

Information supplied by the Office of Employee Services for April 7 to May 4, 2006

New Hires

Hercile Booth, driver's license clerk senior, Iowa City DL station; **Edward Freeman**, mechanic, Council Bluffs-south garage; **Russell Helle**, mechanic, Waterloo garage; **Jacklyn Hiner**, driver's license clerk, Iowa City DL station; **Matthew Law**, field auditor, Finance; **Elizabeth Meier**, driver's license clerk, Waterloo DL station; **Scott Schmit**, equipment operator, Waterloo garage

Promotions

Gregory Anderson, from management analyst, Document Services, to information technology specialist, Information Technology Division; **Antone Arrick**, from equipment operator, Council Bluffs-north garage, to highway maintenance supervisor, Pacific Junction garage; **Jeffrey Brown**, from bridges and structures inspector 1 to bridges and structures inspector 2, Bridges and Structures; **Duane Bunning**, from bridges and structures inspector 1 to bridges and structures inspector 2, Bridges and Structures; **Todd Eichhorst**, from construction technician, Ottumwa construction, to construction technician senior, Marshalltown construction; **George Feazell**, from transportation engineer manager, New Hampton construction, to transportation engineer administrator, District 4 Office; **Paul Gettler**, from bridges and structures inspector 1 to bridges and structures inspector 2, Bridges and Structures; **Ned Lewis,** from motor vehicle captain to motor vehicle commander uniform, Motor Vehicle Enforcement; **Lynn Neff** from bridges and structures inspector 1 to bridges and structures inspector 2, Bridges and Structures; **Mark Sloppy**, from design technician, Design, to environmental specialist senior, Location and Environment; **David Thies**, from planning aide 1 to program planner 1, Transportation Data; **Ronald Waugh**, from equipment operator to equipment operator senior, Grimes garage; **Thomas Wilhelm**, from bridges and structures inspector 1 to bridges and structures inspector 2, Bridges and Structures

Transfers

Kay Williams, from secretary 2, Rail Transportation, to secretary 2, Public Transit

Retirements

Ingrid Collier, driver's license clerk, Davenport DL station; **Sandra Cooper**, driver's license clerk, Burlington DL station; **Wayne Irons**, mechanic, Maintenance

Maintaining our investment

Maintaining Iowa's investment in the interstate system is a substantial part of the DOT's annual maintenance budget. For state fiscal year 2005 (July 1, 2004–June 30, 2005) the DOT let 63 interstate maintenance projects totaling more than $48 million. This does not include the multi-year $426 million I-235 improvement project.

The highest award for a non I-235 interstate project was on I-80 in Polk County near the Altoona interchange. At more than $10.2 million, this grading and paving project was completed by Des Moines Asphalt and Paving.

Second on the list of interstate reconstruction projects for FY 2005 was I-80 in Adair County from west of Iowa 25 east to the Dallas County line. This hot-mix asphalt resurfacing project was let for more than $5.5 million to Henningsen Construction.

Another project coming in at just under $5 million was on I-80 in Scott County. This hot-mix asphalt resurfacing project by McCarthy Improvement Company started 1.5 miles east of the Middle Road interchange and ran to the Mississippi River.

While the major projects seem to attract most of the attention, many smaller projects are underway to maintain the integrity of our interstate system. The DOT's office of Program Management tracks these interstate renewal projects and notes that 20 of the 63 projects let in FY2005 had bid amounts less than $100,000.

Repair work on I-80 in Scott County

(Below and left) Reconstruction of I-80 in Adair County was one of the major interstate reconstruction projects of FY 2005

Major changes for I-235

If you've been to Des Moines in the last four years, you've probably experienced the renewal of I-235 firsthand. This five-year, $426 million set of projects will improve safety and bring the busiest stretch of roadway in Iowa into excellent driving condition. The design work on I-235's bridges is easily recognizable with bright blue guardrail. The three pedestrian bridges bring neighborhoods together and create a wonderful visual effect for drivers on this roadway.

Progress continues on I-235 in the Des Moines area. Mainline paving is scheduled for this construction season with the projects wrapping up next year.